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ABSTRACT

This guide is intended to help high school home economics teachers to teach special needs students who are mainstreamed into their classrooms. It aims to familiarize teachers with types of disabilities and approaches for creating empathy among fellow students who are not disabled. Ideas for working with wheelchair bound and developmentally disabled students are explored, and the principles of work simplification and task analysis are defined. Simple lesson plans for instructing handicapped students in foods and nutrition and appropriate evaluative techniques are shared. Finally, a bibliography of current resources to aid the teacher in adapting lesson plans to student needs is included. It is intended that the teacher can develop many useable classroom ideas with the examples and techniques covered in this guide as a basis. (KC)

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TEACHING UNITS
for
CONSUMER HOME ECONOMICS

1981

TOPIC:

Mainstreaming Ideas for Special Need Students

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Bureau of Vocational Services
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P.O. Box 2219 Room 344
Hartford, CT 06115

October, 1981

MAINSTREAMING IDEAS:

TEACHING FOODS AND NUTRITION TO DISABLED STUDENTS

by

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Consulting Home Economist

Statement of Purpose:

It is the purpose of this publication to familiarize readers with types of disabilities and approaches for creating empathy among fellow students who are not disabled. More importantly, ideas for working with the wheelchair bound and developmentally disabled will be explored. The principles of work simplification and task analysis are defined. Simple lesson plans for instructing handicapped students in foods and nutrition and appropriate evaluative techniques are shared. Finally, a bibliography of current resources to aid the teacher in adapting lesson plans to student needs is included. It is hoped, that the creative teacher can then develop many useable classroom ideas, given examples and techniques.

General Rules for Working with Disabled

When working with any atypical student or groups of students, it is essential for the teacher to focus on what he/she wants to teach. MAINSTREAMING does not necessarily mean just including handicapped youngster in a standard course and hoping they grasp a predetermined curriculum. It is especially important to be cognizant of this when designing programs for the developmentally disabled.

For every program there should be a RATIONALE. A teacher should decide, given students with limitations - "What is the most important thing to teach? What does this child need to know?"

Those skills most necessary for daily living give the cue. What kitchen tasks are most frequently repeated? What is most basic to independent living?

Certainly food preparation, sanitation, menu planning, kitchen safety as well as others, fall in the category of essential. Etiquette for a formal tea, making cakes from scratch, candy making, and other complicated cookery do not. The selection of experiences should be based on simplicity and nutritional value. Often referring to the U.S. Government's Dietary Guidelines can assist in the selection process. Need for simplicity does not imply dooming a person to a lifetime of can opening and convenience foods. Numerous options and a range of activities exist.

In work with the mentally retarded simplicity is the key. Recipes should be partially or fully illustrated with a minimum of terms. The words should be reviewed with class. The process should be simplified. Instruction given in very brief manner, using demonstration and encouraging participation.

When working with wheelchair bound, or those who fatigue easily, other approaches take precedence. Assume, first, that mental functioning is average or above, it usually is. Do not condescend, pamper, or be overprotective of this student. Do not simplify language--simplify task. More creative foods projects can be incorporated, but break down steps and assess which might be difficult from a wheelchair. Then make adjustments in height or location or equipment or proceedure. Reduce the number of steps and movements, whenever possible via task analysis. Do not do preliminary steps for the student. The object in working with this group is to FOSTER INDEPENDENT FUNCTIONING. Concentrate on what the student can do, rather than what he/she cannot do. Ask the student to clarify what obstacles exist that prevent him/her from accomplishing a task. Try to encourage the student to find easy ways of doing things. Use a problem-centered approach.

Try to have students learn a process from start to finish. Observe if he/she masters the sequence of activities necessary to complete the task. After all, why expose students to recipe ideas if they are unable to reproduce them at home. TIME is an important factor. Many of the goals the general student accomplishes can also be successfully completed by the disabled child, given enough time.

Safety is even more important in the mainstreamed classroom than it would be in the home or with non-disabled students. Difficulty in ambulation and poor coordination can contribute to accidents and also can delay quick evacuation in case of emergency. A wheelchair bound individual cannot jump away from a falling pot of hot water. He/she requires more exit time and ramped stairways to leave a building. Some students may have sensory impairment, others may need extended time to make a judgement. For all these reasons it is IMPERATIVE for the teacher to realize his/her responsibilities in the plan of the room, the fire drill exit routine, the proper first aid and fire safety equipment in the room and the clear understanding of safe and acceptable behavior when working with equipment.

Who is Handicapped?

According to the Rehabilation Act of 1973, as ammended:

> "A handicapped individual is any person who has a physical or mental impairment which substantially limits such person's ability to function in one or more major life activities . . . Major life activity means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working." [1]

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[1] U.S. President, Proclamation, "Nondiscrimination on Basis of Handicap" Federal Register XLII, No. 86 May 4, 1977, p. 22678

The above definition includes blind, deaf, wheelchair-bound autistic, and those suffering from palsy, paralysis, dystrophy. Others also included may have less observable handicaps i.e. chronic asmatics arthritics.

An individual may appear to look healthy and yet suffer a major disabilty. Still other students with temporary conditions such as a broken arm or leg, will also require modification of environment or techniques. They should learn to adapt and function safely, however, theirs is not a permanent affliction, so the urgency to understand and apply principles of work simplification is diminished.

The Developmentally Disabled

Besides the temporarily incapacitated and the physically limited there are the developmentally disabled. They account for the largest segment of the mainstreamed population.

"According to the federal developmental Disabilities Assistance Bill of Rights Act, a developmental disability is a severe, chronic disability of a person which:

1. is attributable to a mental or physical impairment
2. is manifested before the person attains twenty-two years
3. is likely to continue indefinitely
4. results in substantial functional limitations in more than three areas -
   - self-care
   - preceptive and expressive language
   - learning
   - mobility
   - self-education
   - capacity for independent living
   - economic self-sufficiency
5. reflects a person's need for a combination and sequence of special interdisciplinary or generic care, treatment or other services which are lifelong or extended duration and individually planned and coordinated.

It is estimated that over 41,000 Connecticut residents or 1.3% of the state's population have such disabilities."[2]

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2. D.D. A Handy Reference to Developmental Disabilities Jargon and Acronyms pub. Developmental Disabilities Office, 342 North Main St., West Hartford Connecticut 06117.

Some common types of disabilities that occur in the young include:

Arthritis - Inflamation of a joint

Cerebral Palsy - A persisting qualitative motor disorder appearing before the age of three years, due to a nonprogressive damage of the brain.

Hemophilia - A hereditary hemorrhagic diathesis characterized by heathroses and deep tissue bleeding, due to deficient generation of intrinsic thromboplastin.

Muscular Dystrophies - Characterized by slowly progressing weakness and atrophy of the muscles, usually affecting the limb girdle muscles.

Phocomelia - A developmental anomaly characterized by the absence of the proximal portion of a limb or limbs, the hands or feet being attached to the trunk of the body by a single small, irregularly shaped bone.

Sickel Cell Anemia - A herediatry, genetically determined hemolytic anemia, one the heoglobino-pothies, occurring in the Negro, characterized by arthalgia, acute attacks of abdominal pain, ulcerations of lower extemities, and outshaped erythrocytes in the blood.

Spina Bifida - A developmental anomaly characterized by a defect in the bony encasement of the spinal cord.[3]

There are numerous other temporary and permanent disabilities a teacher may discover when working with his/her students. It is the instructor's responsibility to become familiar with the limitations associated with these states and then to work with students to maximize their potential. A teacher in determining a grade should never penalize a youngster because of a disability.

Creating Awareness and Sensitivity to the Handicapped

There are a variety of techniques from discussion to reports that will familiarize one with the problems of the disabled. This does not necessarily mean that he/she is then empathetic. Often slight exposure to individuals with real difficulties in functioning has the opposite effect. Many students and some adults prefer to stay distant from an individual in a wheelchair, a person using portable oxygen or a retarded child. In simulating empathy exercises at least one is made aware of the time and effort it takes for handicapped persons to perform some routine tasks. Respect for that person's effort may be gained and prejudice reduced by having the class participate in some simple activities.

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[3]Dorland's Medical Dictionary, 24th Edition, Philadelphia: W.B. Saunders Co., 1965.

Before attempting to create learning experiences for the class it is wise to have your own frame of reference. Certainly readings are helpful. Also, try working with special equipment. Ask a pharmacist or surgical supplier to lend a wheelchair, three pronged cane, walker and the proper sized crutches. Ask for minimal instructions in their use and safety. Then, take them home for the week-end.

Set a number of hours to work with each. Try to carry on regular activities. Observe the inability to move down stairs in the wheelchair or using other equipment. Notice, also, the impossibility of going over raised thresholds between hallway and rooms. Kitchen functioning poses the greatest problems. Try reaching the knobs on sink or range from a sitting position:

1) What difficulties are encountered reaching for food in the refrigerator?
2) How does one carry items from place to place when both hands are engaged turning the wheels on the chair?
3) How will dishes and other items be cleaned and stored in cabinets beyond one's reach? These are just the first few obvious questions that arise. The need to learn transfer skills and to adapt a bathroom for easy use also become evident.

More importantly, like the newly disabled, the devasting feeling of being unable to complete routine tasks and the sense of frustration when dealing with barriers is an enormous part of the learning experience.

Also, notice the time factor. It takes much longer to get from place to place with walkers, crutches or a wheelchair. The expenditure of energy in just operating these assistive devices begins to show. Very tired arms from operating the wheelchair or from carrying the walker or using the crutches occur.

The final reaction to this activity may be response by other family members to one's immobility. The permanency of certain disabilities changes many family lifestyles forever. It may create a strain on some family members while rallying others to become more helpful, more concerned and self-sufficient at an early age. These changes in role might well be discussed with students in a panel presentation that include a social worker, physical thearapist and a family member who has adjusted to a loved one's disability.

Although difficulities in ambulation may pose more obvious problems, not to be overlooked is limited use of arms, visual problems, and general weakness. One might simulate conditions that might affect a person who has the use of only one arm by using a sling with a mittened hand.

What difficulties might occur in the preparation of raw vegetables? How would personal care be affected?

Classroom Exercises

When the teacher is comfortable enough with equipment and his/her own attitudes, present information to the class. Identify the amount of time to be spent, probably two or three class periods. This format would be most appropriate for family living courses.

Objectives:

To understand some physical adjustments necessary with various handicapping conditions.

To recognize the need for more time in performing routine tasks.

To recognize the need to modify environment and equipment to perform routine tasks.

To sense the frustration of the newly disabled in coping with routine tasks.

To understand that modification in procedure can allow one to function more independently.

Methodology:

Expose students to assistive devices by using them yourself in the classroom. Show students the difficulty in reaching "normal" heights from a sitting position. Identify modifications necessary to enable one to function in a kitchen. Allow students opportunities to discuss how a disability has touched their family and what adjustments were made to assist the person toward self-sufficiency.

Have students remove shoes, and take off jackets or sweaters. Using slings and blindfolds have each student put shoes and sweaters back on. Discuss how time, effort and style of clothing/shoes affected the procedure. Ask for feedback--how student felt, how how he/she found a new way to do something.

Have a representative from a surgical supply company talk about assistive devices and show their use. Allow students to examine the equipment, especially walking devices, crutches, wheelchairs. Have students move to counter, pick up a simulated lunchtray and return to their seats.

Talk about adjustments necessary for someone who is blind, who has the use of one arm, who has general weakness. Review classroom equipment. What items are unusually heavy for their size. What shapes might be hard to grasp for persons with limited hand usage? What heights and equipment would need to be modified to improve working conditions for the disabled? How could certain tasks be done without modifying surroundings? Let students think about these questions. Assign one task such as making toast and coffee. Have students outline how this could be most easily done.

Materials:

Assistive devices, literature about the safe use of products, pharmacist/surgical supply person or nurse, teacher and students.

Evaluation:

Can students verbalize the difficulties in task performance and suggest modifications? Do they understand the frustration involved in trying to "do things as usual" under handicapped conditions? Have students write a method for simplifying routine task.

Other ideas:

Use of films about various disabilities, offered through SERC Hartford, CT. Some rather outdated films about modifications for homemakers are available through the University of Connecticut. Although these films (circa late 1950's) show differing attitudes to women's roles in the home and also show use of outdated equipment, they may be of some benefit because they emphasize the positive and show people with genuine disabilities, actually performing everyday tasks using their own ingenuity, rather than a variety of aids.

Select books and materials about kitchen modifications and task simplification. Assign chapters to students and have them report. Allow interested students the opportunity to demonstrate how they might modify an area or steps in a procedure so someone with a specific disability could perform them. Talk about the general implications or good organization for and good design for everyone.

Empathy Experiences for the Learning Disabled

Besides excellent films on various types of learning disabilities - see SERC reference listings, there are some standard experiences that create an understanding of what a learning disability is:

Methodology:

Involve class in a discussion of learning disabilities. Some students may relate how they had difficulty learning to read as young students,

others may have familiarity with dyslexia. Some, although not realizing a disability may exist, might discuss an acquaintance who cannot follow a map and who can become easily lost in fairly familiar locations.

Having students bring their own mirrors, allow students to practice writting their name, without looking on the paper, but looking into the mirror instead. Notice the amount of time it takes to accomplish this.

Pass out a dittoed paragraph about food preparation or some familiar topic. To two students give another version of the paragraph printed from right to left. Go through the class asking students to read a line at a time. Notice what happens to the student with the words in reversed order. Notice the rest of the classes's impatience. Have the most critical student try to read the modified copy. Stress to students that many learning disabled people see the written word this way, in confusing patterns, rather than logical sentences and that time and practice of techniques allows them to progress.

Another technique; assign a paragraph. Turn every four-syllable word into a greek or latin word. Then have students read. Emphasize how reading level can effect the outcome of a simple recipe, if words and directions are too complicated for some students. Discuss what types of modifications might be made for learning disabled. How might fractions that are a part of measuring be illustrated to help someone who is confused by the similarities of fractions.

Evaluation:

Student's ability to define a learning disability and to identify ways that materials might be modified for these students.

Principles of Work Simplification

Before one can make individual assessments of surroundings it is wise to be familiar with basic principles of work simplification and task analysis. These apply to everyone. They are generalizations of key ideas to streamline routine tasks. When faced with persons of limited energy with difficulty in ambulation or dexterity they are essential to maximize success!

Just as with an individual there are daily living activities and then work and home maintainence and then leisure activities, in a classroom where there are foods experiences, certain similarities exist.

WHAT: What must be done varies with assignments: at home values suggest certain activities. In preparing foods for example, there are the selection, storage, cleaning preparing/cooking, serving and cleaning phases; these must be done, and in that sequence.

WHO: Who performs the tasks can vary. Often a newly disabled person is "shut out" from household tasks instead of being included. It becomes easier to work around the person than to assess the adaptations necessary to allow full participation. When items are beyond reach or too heavy to reach, someone else may get the object. To a person whose energy level varies the WHO may be flexible. The disabled homemaker, for example, may be able to prepare meals 80% of the time. Someone else, relative, neighbor, fast food chain may fill the other 20%. From the home economics perspective (and usually from the health care team as well) the disabled person should be encouraged to at least learn how to perform tasks, even if he/she will not always be totally responsible for accomplishing them.

WHEN: When the time factor in a classroom situation is another area that is beyond control. It would be nice if scheduling allows for the mainstreaming of youngsters at a time when they experience their greatest energy level, but this is nearly impossible to predict. Suffice it to say that when any individual initiates a time and energy consuming task, it should be during a phase that can accompodate that activity e.g. One probably shouldn't start to cut out a new dress at 11:00 p.m. and hope for its completion by morning. One might not begin to peel potatoes for a salad for a family picnic that begins in an hour.

In preparing a simple soup and salad lunch, plot out when preparation can occur and when the final product will be combined and served. Here the concept of PACING blends into the WHEN. Pacing is lining up of a sequence of activity that allows for fluctuating energy level. In pacing, a task requiring a high level of energy is sandwiched between two more sedentary activities or after a rest period. Pacing might include the plan for a picnic where easy to pack, precut foods are to be served. The hostess decides to make peanutbutter brownies and raisin cookies for dessert because they are inexpensive, easy to make ahead, not messy, have premeasured serving sizes, can last well and are nutritious. She makes them a day or two ahead of the picnic so as not to be too tired when preparing other food. This same principle applies to the classroom. Pace out tasks for Wheelchair bound or students on crutches or using a walker or who fatigue easily. Allow rest breaks where appropriate.

WHERE: Where location of task is one factor the classroom teacher can control. Many tasks may be done in specific work areas. The idea is to have the essential equipment and materials close to task i.e. in close PROXIMITY. One may find many tasks routinely done while standing; are more comfortable and use less energy, when the person is seated. Paring vegetables

is one example. In order not to have many adaptations for the disabled student, think of the class in general. Also apply the PRINCIPLE OF FIRST USE. Begin to store things closest to where they are needed. In making a cup of tea, would it be easier to have a plug-in electrical pot close to the sink and below the cabinet that stores the cups and with an extra sugar bowl near by, or must one be conventional and keep tea bags and sugar in tins near the preparation area the whistling kettle on the range and the cups and spoons somewhere else? For the disabled, storage should go hand in hand with the most frequently performed tasks.

HOW: How a task is done is the determining factor of whether it may be performed at all. Three principles of motion economy cover this aspect of work simplification:

1. Change in body posture. Use of sedentary position to prevent tiring. Use of body mechanics that reduce the affect of gravity, e.g. bending knees to stoop and holding large item close to body as opposed to bending at waist and lifting.

2. Change in the arrangement of things. Putting items closer to reach (18" work area). This would also include changes in work heights, when appropriate and use of lazy susans to help put items into reach.

3. Changes in or addition of equipment. Use of an electric can opener is assistive to a person with joint degeneration of the hands. Use of paper on work surface to reduce clean up time and to reduce the hand motions involved in wiping down a counter. A stationary mixer as opposed to the hand held type, frees one hand. Use of assistive devices such as a universal cuff that will help someone with limited finger movement hold utensils, self feed and facilitate personal care by using predominantly wrist action.

Task Analysis

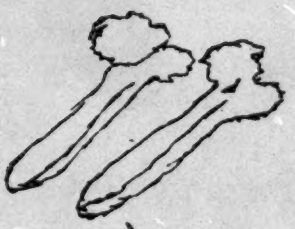
Task analysis takes into consideration the above rules. It is a way to review a process from beginning to end. The object is to reduce the number of steps in the task. One can do this by combining several steps or by short-cutting them entirely. Below are a few examples of changes in the preparation of a food item using task analysis:

> In the making of baked macaroni a classic white sauce, cooked up in a double boiler is added to cooked and drained elbow macaroni, placed in a greased baking dish and topped with bread crumbs and cheese and set to bake. Clean up would include two pans, a pot and cassarole dish, grater and other utensils.
>
> It would be easier to cook pasta and drain in collander, add evaporated milk into original pot, stir in cheese, cook slightly and serve topped with croutons. Cooking time is diminished and the amount of pots and pans to clean is significantly reduced. In cooking Italian pasta one could apply a similar principle. Cook until al dente, remove and drain, cook sauce (commercially prepared is easier) in the same spaghetti pot and return pasta, when warm. Serve from pot.
>
> Steps such as the extra pan for the sauce and a serving bowl are eliminated. Students can think of numerous other possibilities if given the challenge. Try a game. Who (or whose mother) can use the least number of pots and pans in a week?
>
> How were menus altered? How were steps reduced? Was there a change in standards involved in the serving of food? Under what circumstances would participants use these techniques?

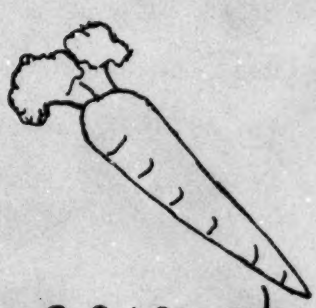
A step beyond task analysis and the reduction of activity to accomplish a given goal is the modification of recipes for youngsters who might also be learning disabled. The task analysis is important because it simplifies things for the child who has poor retention. Add to this the possibility of using illustrated recipes with minimal wording and you can apply this mode of learning to trainable mentally retarded students. Use standard distinguishable symbols for recipes. Maintain uniformity of style. For example a ½ c. is illustrated with a picture of a cup which is half full, do not change the symbol to a shorter cup which is half the size of the first one. To students with a grasp of written language, the use of some

familiar words in the recipe can reinforce reading skills. The next several pages show illustrations inspired by a variety of sources. You may want to add your own. These symbols can be traced onto dittos and combined for an endless variety of recipes.

The following pages include the symbols and how they were used to construct simple recipes for developmentally disabled students at the Duggan school in Waterbury, CT. Class size was nine to fourteen students. Mental age varied from 2 years to 7 years and higher functioning groups 7 to 10 years. Lesson plans show how recipes were incorporated. In other phases of the project individual assessment that was non-written and minimally verbal was used to evaluate student abilities. Notice, too, segments of the course dealt heavily with safety. Recipe selection was based on ease and also on dietary goals of the United States. If youngsters can learn and retain only a few facts it is important to teach life sustaining skills first. If time permits expansion then these skills can lead to pre-employment programs.

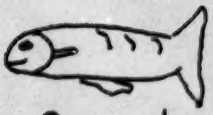


celery



carrot

pepper



fish

fries

beans corn

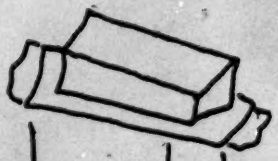
green beans

chicken

broccoli cabbage

pear tomato

egg

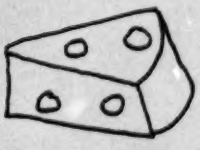


butter

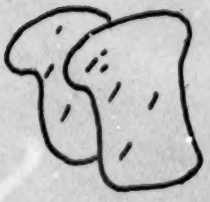
apple

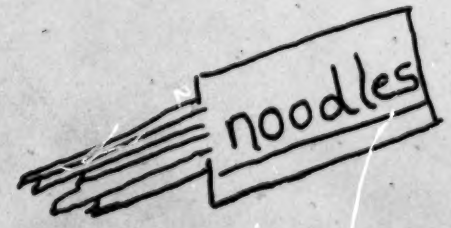
potato

lemon

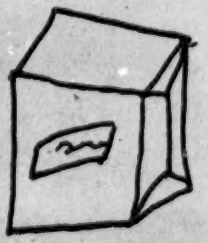


cheese fruit raisins





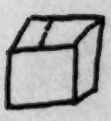
bread



meat

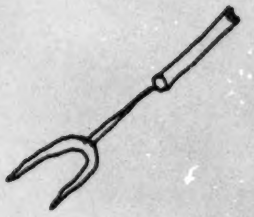
catsup sugar

peanut butter



spices

cake

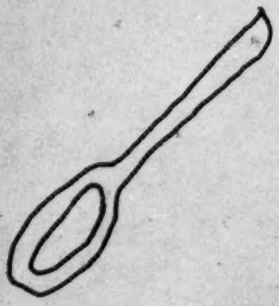


fork

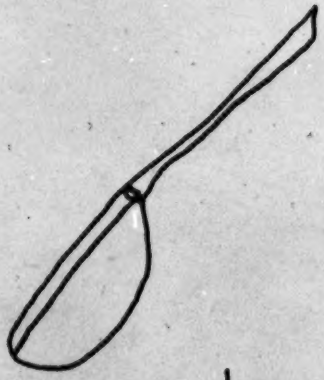
brush

Tbsp.

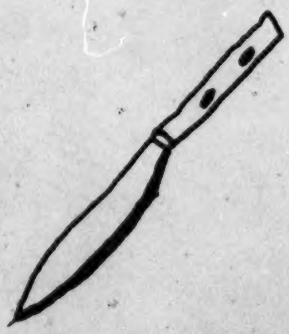
tsp.



mixing spoon



spatula



knife

spreader

1 cup

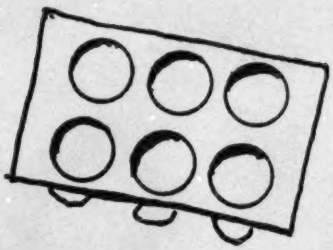
½ cup

¼ cup

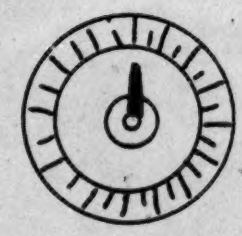
¾ cup

glass

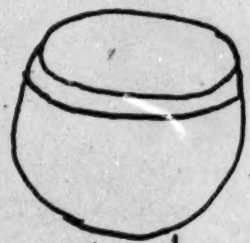
pour



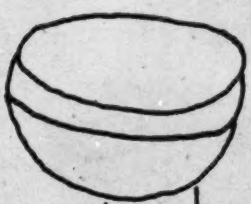
muffin tin



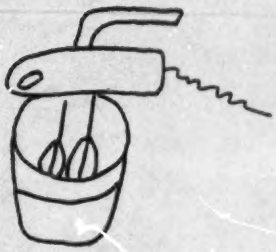
temp



2qt. bowl



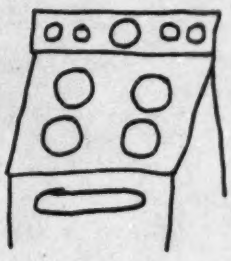
1qt. bowl



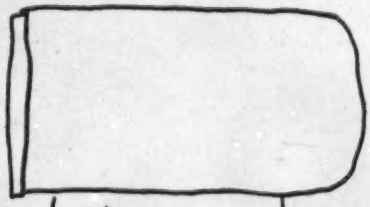
mix

stir

bake



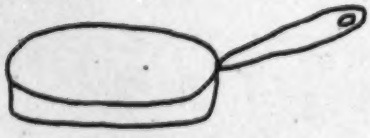
cook



cookie sheet

pot

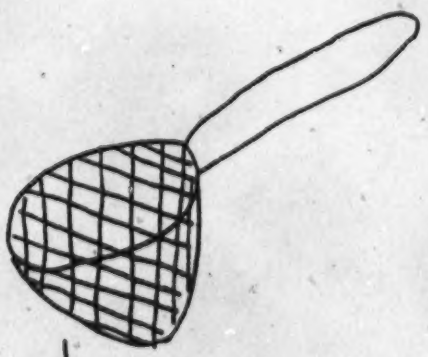
cake pan



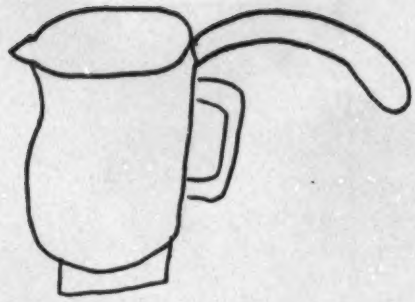
fry pan

wisk

shaker

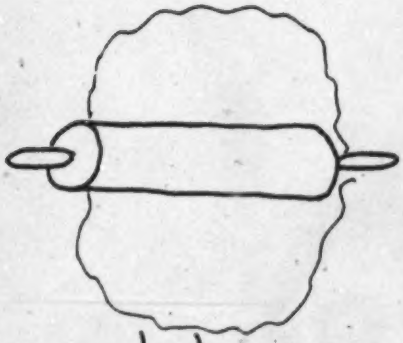


strainer



sifter

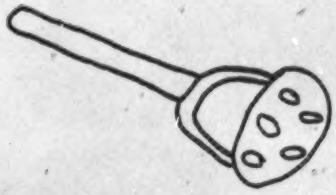
peeler



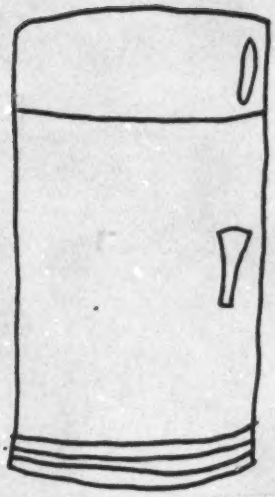
rolling pin

pastry blender

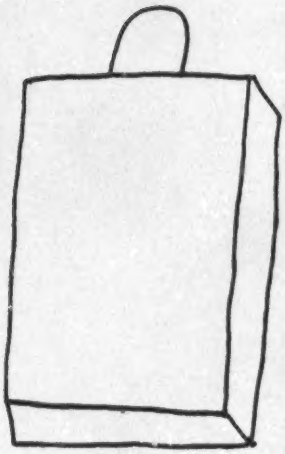
slotted spoon



masher

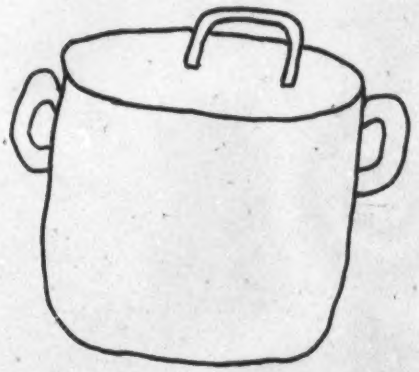


refrigerator



cutting board

toaster



pot

Peanut Butter Bread

In Bowl

1 3/4

1/3

1

3/4

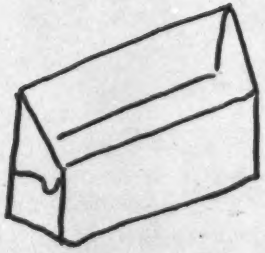
Peanut Butter

1 3/4

Tbsp.

Baking Powder

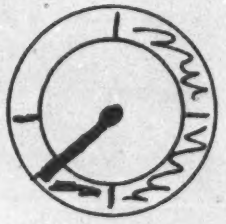
Pour



Loaf Pan greased

Bake

350°



40 minutes

Cool 10 minutes

Remove from pan

Lesson V

Objectives:

To be able to name ingredients in a skillet casserole
To recognize carrots and pumpkin as a source of vitamin A
To know sources and functionsof vitamin A
To be aware of the importance of milk in the diet
To be able to know where milk comes from
To be able to now other dairy products
To be aware of function of calcium rich foods in diet
To be able to make snack foods using vitamin A rich food

Procedures:

Recap previous lesson on skillet casserole
Name ingredients in skillet casserole and talk about home experience
Help students read and prepare two recipes: raw carrot salad
golden nugget cookies
Teacher demonstration of GRATING
Show posters milk and milk products
View film*
Sample snaks made in class with glass of milk

Materials:

Teachers, students, posters, demonstration,
Ingredients for recipes: cups, forks

*New England Dairy Council fim "Uncle Jim's Dairy Farm"
designed for grades two through six
Life on a dairy farm; dairying; farm girl and calf at country fair.

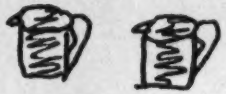
Follow up:

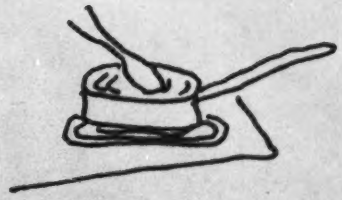
Homework - given to all students for next class meeting
In the same brown lunch bag their cookies were taken home in, each student will bring the cap, label or product of a dairy food.

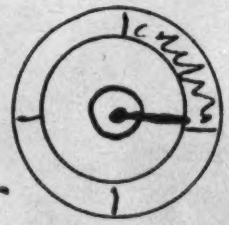
Test - At next class meeting written test covering safety in kitchen, skillet casserole, calcium rich foods

Tuna Skillet Lunch

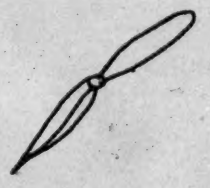
In a , fry 1 green pepper, chopped

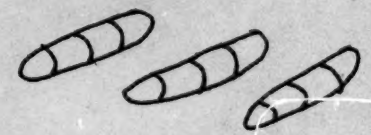
Add
- 1 — 6 oz. tuna
- 2 — Tbsp. chopped pimento
- 2 —  cups cooked rice
- 1 — can Chedder cheese soup
- 1 — cup milk

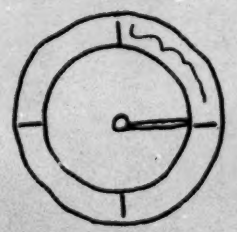


Stir, simmer 15 min. 

Bean-Dog Skillet Lunch

In a , cook 1 
chopped onion

Add
- 3 chopped hot dogs 
- 1 can baked beans
- 2 cups noodles, cooked
- 1 4 oz. can tomato sauce

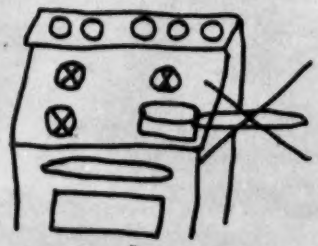
stir, simmer 15 min. 

Safety First

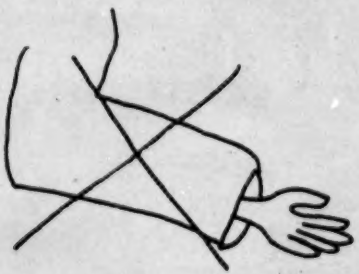
PAY ATTENTION - NO PLAYING

Clean up spills

NO Knives in wash water



NO handles facing out



NO

Wide Sleeves

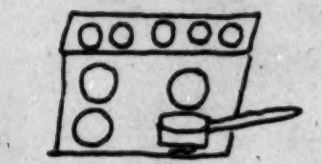
Keep Counter Clean

DON'T

Touch Hot Appliances

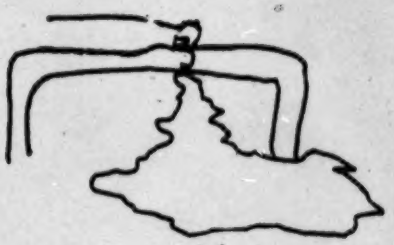
Test Name:

Put ⊗ for not safe:

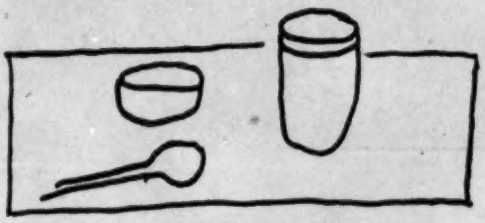


Handle out

Knife on side



Spill



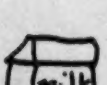
Neat counter

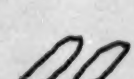
Long sleeve

⊗ What does not belong in Tuna Skillet?

tuna

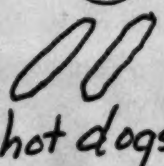
pepper





hot dogs

⊗ What does not belong in a Bean-Dog Skillet?



hot dogs

beans

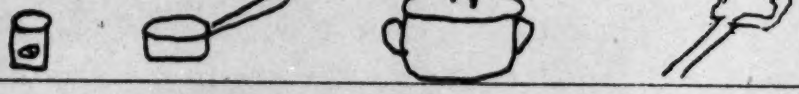
noodles

carrots

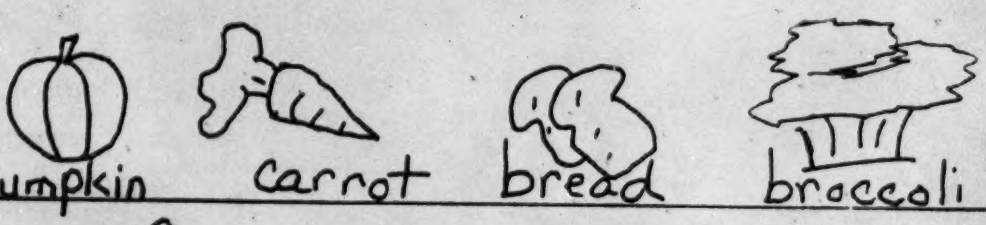
tomato sauce

Circle right answer

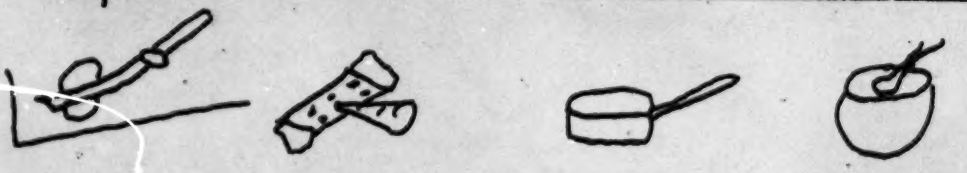
Skillet



What is High in Vitamin A?



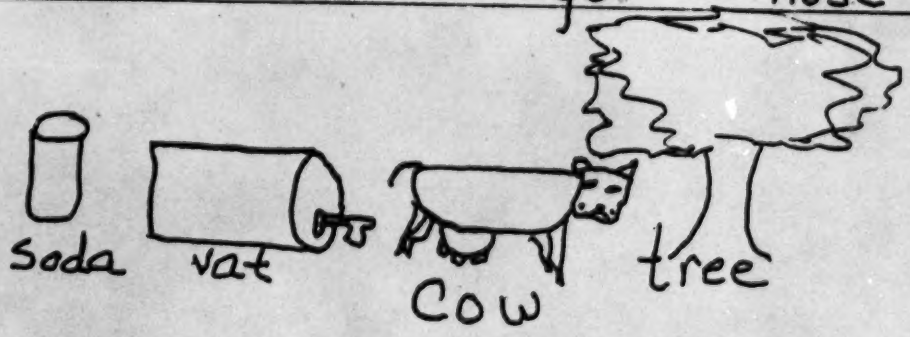
Grate



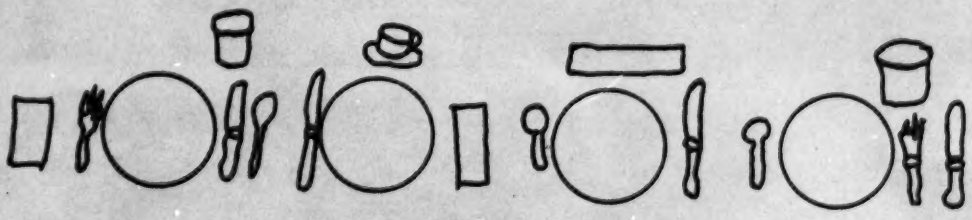
Calcium is in

Calcium helps

Milk comes from



Place Setting



Lesson VI

Objectives:
To be able to select and bring to school foods made from milk
To be able to select foods for a balanced meal
To know importance of color for appetite appeal
To be aware of cost as a consideration in menu planning
To know why reading food labels is important
To know what to look for on labels
To try new and different types of dairy products

Procedures:
Share dairy products brought to school in homework bag
Sit down test as evaluative procedure for previous lab; circle picture-answers
Shopping (with cart) with partner thru classroom store for components of a balanced meal
Taste test experience - cheeses
View film Read the Label, Set a Better Table

Materials:
Teachers, students, empty milk products cartons, tests, pencils, shopping cart and grocery items in classroom store, four different cheeses, crackers, juice, apples

Follow-Up:
Introduction for next lab; discussion and follow-up feedback from film

Final Test: Individual Evaluation

Question 1, a asked, if no response, then 1, b (clarifying) asked.

1. What is the first thing you do when you enter the kitchen?

   b. What do we do before we begin to cook?

2. Name two safety rules.

   b. How do you stay safe from burns and cute?

3. What is the most important meal of the day?

   b. We have breakfast, lunch and dinner every day, which is the most important?

4. What are two things we do every day to stay clean and neat?

   b. We had people come to show us how to stay clean and neat, can you tell me what they did?

5. Pictures of carrots, applesauce and a grapefruit. Cover with this circle the one that has a lot of vitamin A. b. The one that helps our eyes to see in the dark and helps our skin.

6. Using these things, can you show me how to set the table?

7. Pictures of Hamburger, rice and milk. Pick the one that has calcium in it. B. The one that helps our bones and teeth to grow.

8. Pictures of a frosted cake, dish of ice cream and apple. Pick the one that is not sweet. Show me the snack that has no sugar added.

9. Utensils out - wooden spoon, tongs, pancake turner. Pick the utensil we can use to take lettuce from a bowl, without using our hands.

10. Food models out. We learned about the milk group, the meat group the bread/cereal group and the fruit vegetable group. Can you make a meal, using these pictures; that has something from every group?

At the conclusion, teacher tells student the number right, and says "I know you have learned a lot. I can tell by your answers. I am proud of you." Each student received a flower for his/her lapel. All seemed pleased.

Duggan School Home Economics Project Final Report
Submitted by Sandra C. Maineri and Barbara Newell
Consulting Home Economists

An eleven week exploratory project in home economics is nearing completion for 42 mentally retarded trainable students at Duggan School, Waterbury. A team teaching approach was used.

Curriculum development focused on designing course content that fostered independent living skills. Much attention was paid to selection of food preparation labs that allowed for assessment of individual skills. Simplicity in projects, use of pictorial recipes and tests, short ten-minute segments punctuated by student activity were key techniques used.

Students favorably responded to class discussions, pantomine (of safety rules and manners) and to films and lab work.

Because of a delay in the delivery of laundry equipment students had little exposure to home maintainence. Instead a dual lab concentrated on personal hygiene. An expansion of content should include laundry skills, bedmaking and crafts for personal satisfaction.

Care should be given to reinforce major objectives of current programs through discussions with classroom teachers.

Response from parents and Duggan staff have been very favorable. Evaluation which often includes observation of techniques and repetition of key facts also has been surprisingly positive. Students indicate they retain much specific information throughout the course. They have been eager to participate and look forward to their once a week hour-long sessions.

submitted by:
Sandra Maineri and
Barbara Newell

Planning Barrier-Free Design

Barrier-free design as a concept is broader than accomodating wheelchair bound students. When followed to the spirit of intent, the idea is to reduce obstacles for all handicapped. This would include braille lettering and numbering of rooms and elevator floors. It would mean adjusting weights in heavy doors so that arthritics could open them with ease and a variety of other minor modifications that would facilitate functioning for everyone.

It automatically suggests a need for optimum safety as well for two reasons. There is a multiplication factor when it comes to accidents and the handicapped. The higher the number of disabilities a person has, the greater his/her chances of being injured. The frequency of accidents among disabled is also greater than that of the general population.

Secondly, given the fact that may disabled cannot move as quickly or surely as others, exit time from a room or building is greater.

Foods rooms should be equipped with fire extinguisher, fire blanket, first aide kit, a working office intercom. There should be close proximity to an exit and special care as to how disabled students would exit, especially those requiring assistance.

The Foods Room

Attention should be paid to proper lighting and to floor surfaces. No moveable throw rugs should exit where students have difficulty with ambulation.

Work Heights: A section might be available for wheelchair bound students. The proper surface height from a seated position is 31'. This allows arm rests of a wheelchair to slide under the table. Some counter heights of 32' may still be quite useable. The section used by wheelchair bound stu-

dents should have no lower cabinets, so that the chair may fit under the counter. Whenever possible, continuous surface affords ease in sliding utensils and ingredients along the counter top. If one is unable to mount a wall oven at a lower height or to install counter top cooking units, it is suggested that one use fry pan and toaster/oven for the student. The average range is just too high to tend to from a sitting position even if one can reach knobs and even if there is a hung mirror so that the student can "watch the pot". The appropriate sink depth is 5' and placed into the 31' high counter. On/Off handles should be within reach as should spray device. The sprayer will help one who has the use of only one arm manage rinsing dishes. The heights overhead cabinets (or one cabinet) can also be lowered closer to the counter (about 12' above) so that more of the shelves will be reached from a sitting position. Unfortunately, this height hinders the use of some small appliances such as a blender or coffee machine. They will be too tall to store on the counter under the cabinet.

Electric outlets should be wanescoating height, or put into the low counter. The refrigerator door should open away from counter so there is area for food to be placed in close proximity in seated position. Lap trays that attach to a wheelchair are also helpful.

1. Much of the above kitchen plan has application for shorter persons. When working with retarded youngsters, many were found to be much shorter than their cronilogical ages implied. The above arrangement would accomodate a person 5'4" or shorter.

Work Triangle

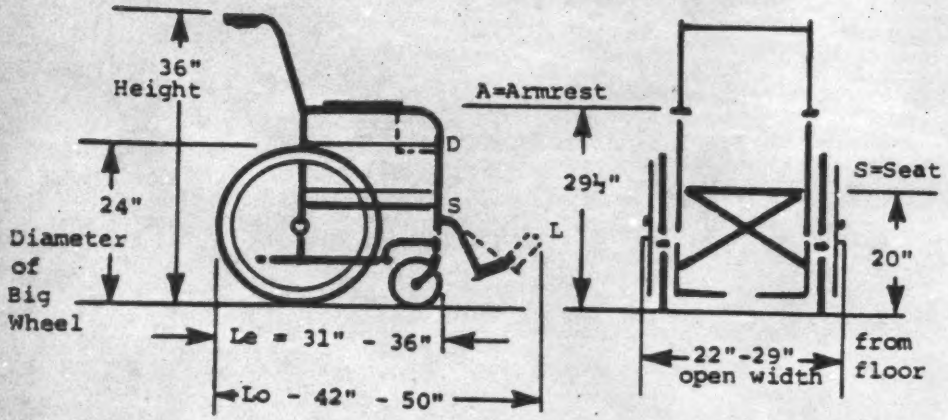
It goes without saying that work triangles that comply with design standards are optimum. The total area (sum of the three sides from range

to sink to refrigerator and return) should be 22 feet or less, with 4 to 9 feet between range and refrigerator, 4 to 7 feet between sink and refrigerator and 4 to 6 feet between sink and range. If an inordinate distance occurs, say between sink and range, one might suggest the use of rolling cart for transporting pots of water and steaming pots of food. Much of the kitchen area should be proper height for normal students unless all users of the kitchen are unusually short or wheelchair bound.

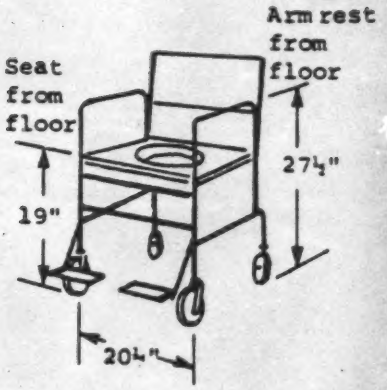
Cleaning products can be stored on a ledge over the sink or a few roll-out drawers under part of the counter can be used. Lighting via strips and outlets may be added. Avoid threshholds between rooms. Have chairs that allow for transfers and tables that a wheelchair might fit under. For visually impaired, special adaptive switches can be added. Mr YUK stickers can be placed on cleaning items to make them easily distinguishable. Sharp knives and other utensils that could injure should be stored together in a knife rack or separate drawer. All other items should be placed in close proximity to where they are used. For specifics on work heights for those with assistive devices see next pages of attachment from the N.Y.U. Institute of Rehabilitation Medicine.

Lawton
bilitation Courses
.U. Institute of Rehabilitation Medicine

WHEELCHAIR MEASUREMENTS*

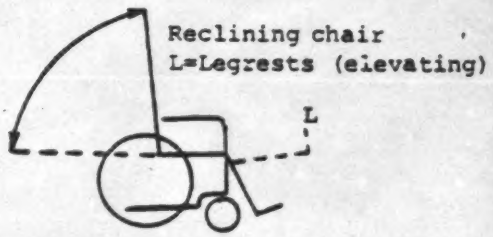


COMMODE CHAIR**

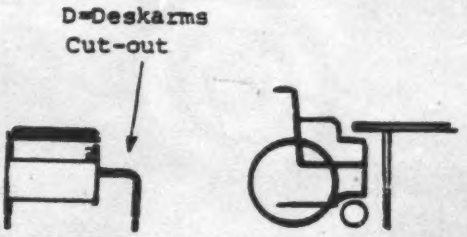


Over-all open width

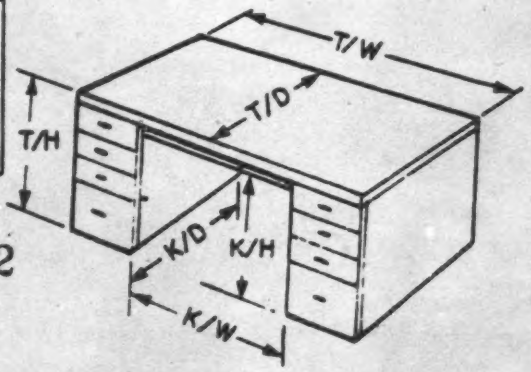
WIDTH of open chair is measured from handrim of one big wheel to other. Width varies with armrests	W I D T H when armrests are	
	stationary	removable
Adult narrow chair; Junior chair	22"	24"
Adult chair; Reclining chair	24"	26½"
Motorized chair	25½"	29"
One-Arm Drive	28"	29"
Vertical tips on big wheels increase width 1"-2"		



OTHER WHEELCHAIR MEASUREMENTS	
Lo = Length including footrests or legrests	42" - 50"
Le = Length without footrests or legrests	31" - 36"
F = Footrests when removed decrease length when removed decrease weight 5 lbs.	11"
Le = Legrests when removed decrease length when removed decrease weight 10½ lbs.	14"
S = Seat: height from floor ..... Junior 1-2½" lower than adult chair	20"
A = Armrests: height from floor	29½"
D = Deskarms: cut-out: height from floor depth: 5"	24"

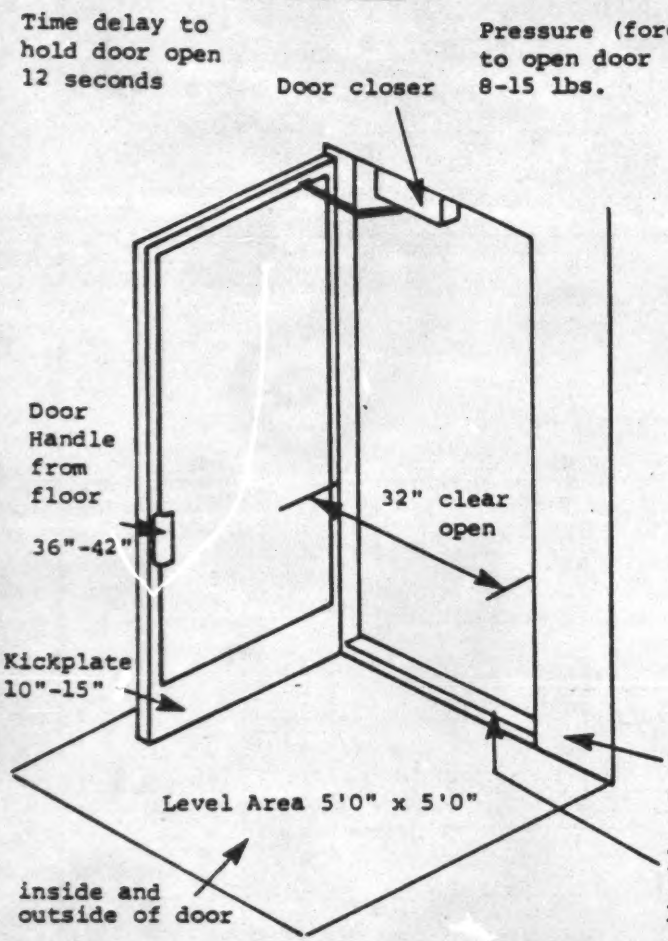


TABLES, DESKS, COUNTER TOPS, LAVATORIES, SINKS ***	
T/H = Top Work Surface Height	29"-31"
T/W = Top Work Surface Width	26"-32"
T/D = Top Work Surface Depth	24"
K/W = Knee Space Width	26"-32"
K/H = Knee Space Height	26½"-29½"
K/D = Knee Space Depth for seated work	24"



*From: Everest & Jennings Catalogue
**From: Activaid Catalogue
***Range of measurements from references 2, 3, 5, 9.

DOOR*


Time delay to hold door open 12 seconds
Door closer
Pressure (force) to open door 8-15 lbs.
Door Handle from floor
36"-42"
32" clear open
Kickplate 10"-15"
Level Area 5'0" x 5'0"
inside and outside of door

12"-18" Wall Space is needed on opening side of door (inside and outside).

Threshold Height
3/4" maximum at exterior door
1/2" maximum at interior door

6'0" x 6'0" between two doors

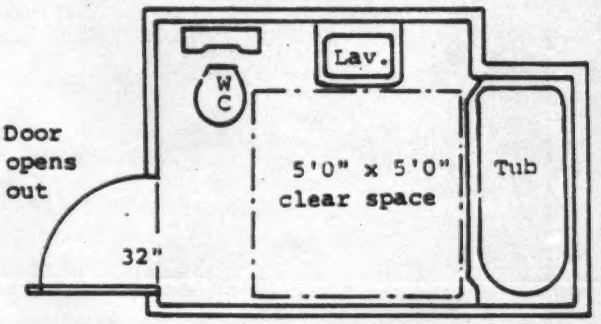
About 5'0" x 5'0" Floor Space* Needed For:

Turning wheelchair 360 or 180 degrees.

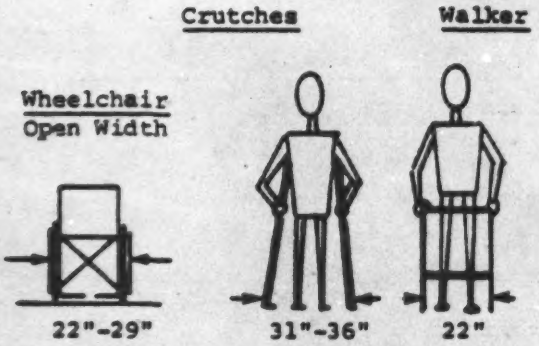
For wheelchair approach between: Walls, bed and wall; cabinet and wall; fixtures and wall; cabinets and cabinets, etc.

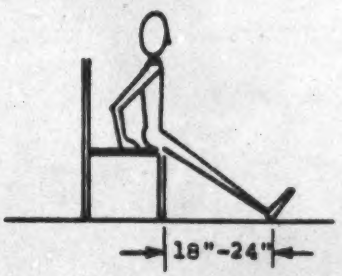
Only 4'0" x 4'0" if there is a toe space 6" deep and 8¾" high.

BATHROOM **



NEEDED SPACE FOR CRUTCHES, WALKERS & BRACES ***





18"-24" space needed from front edge of seat for locking kneelock of leg brace or prosthesis.

HALLWAYS WIDTH: Minimum 42 in.
For easy turning into rooms 48 in.
For two wheelchairs passing 60 in.

* Drawing and measurements from: Accessibility Modifications by R. L. Mace, pp. 22 (see ref. #2).
** Drawing and measurements from: Barrier Free Design by R. A. Williams, p. 11 (see ref. #3).
*** Measurements from: Accessibility of College Campuses by S. Cotler & A. Graff, pp. 11 (see ref. #5.)
All References on page 4.

E. B. Lawton, Rehabilitation Courses
N.Y.U. Institute of Rehabilitation Medicine

scale: 1½"=1'

ANTHROPOMETRICS*

FEET	REACH STANDING	REACH SITTING
7	vertical reach 83"	
½		
6	oblique vertical reach 76½"	
½	head height 69"	67½" vertical reach
5	eye level 64½"	62½" oblique vert reach
½	shoulder height 56½"	55½" forw. vert. reach
4		52½" head height
½	elbow level 44"	48" eye level
3		41" shoulder height
½	knuckle height 30"	
2		27½ elbow level
½		
1		15" knuckle height
½		
0		

HEIGHTS FROM FLOOR CONVENIENT FOR SITTING AND STANDING

Range of measurements from references 2 and 5, and from author's experience

74" mirror (for sitting and standing) base: 34" close to rim of sink

60" elevator buttons base: 42"

48" telephone dial set coin slot

42" closet rod

40" shelf, towel rack dispenser

36" window sill

33" railing

31½" top tables, desks, lavatories, sinks

29½" knee space height

20" bed, toilet, & wheelchair seat

18" convenience outlets

13" toe space under bed

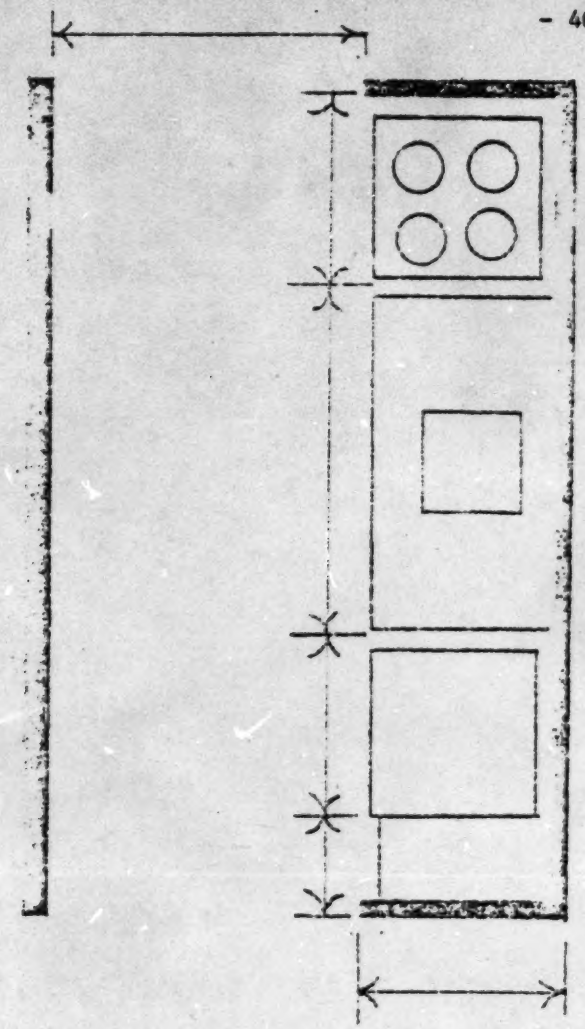
6" deep recessed toe space under cabinets

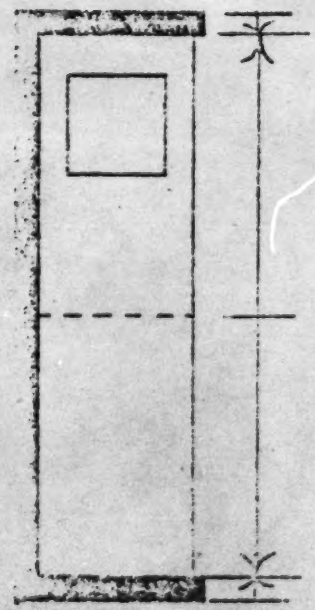
8" height

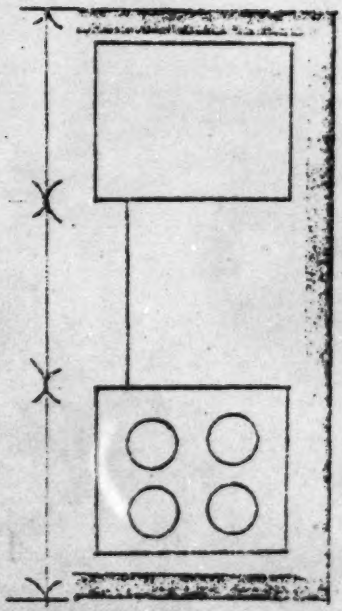
MIRROR * * *

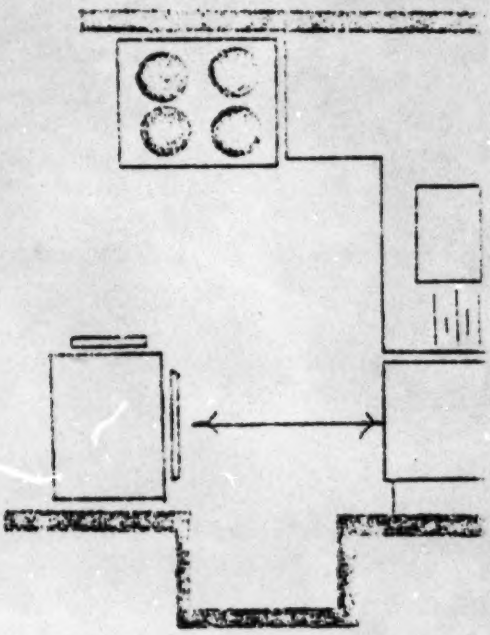
Questions to Assess Student Ability in the Kitchen

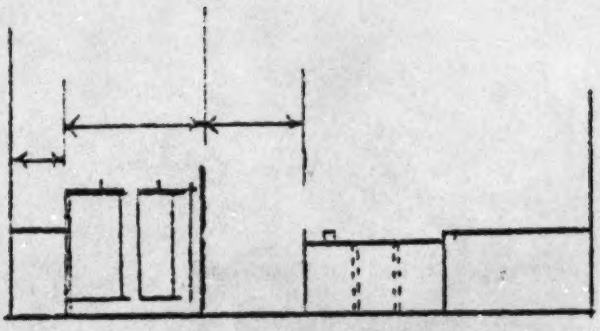
1. What is the table height? _____ Does a wheelchair fit under it?
2. Can student open refrigerator door and take out/and return food items?
3. Can student reach freezer door and remove/return food?
4. Can student reach faucets of sink?
5. Can student reach bottom of basin?
6. Can student reach storage areas where food, utensils, dishes, silverware, pots and pans and condiments are stored?
7. Can student open and close cabinetry?
8. Can student carry items within the work triangle?
9. Can student reach and manipulate knobs on range?
10. Can student light pilot light, if gas range in use?
11. Can student open/close door and remove food?
12. Can student manage use of broiler?
13. If dishwasher, can student load/unload and operate it?
14. Can student reach other appliances and operate them (this includes reaching outlet to plug in?)
15. Is there enough continuous counter space to assist in movement of heavy items?
16. Using diagrams suggest modifications, if any to assist in more accessible kitchen design.

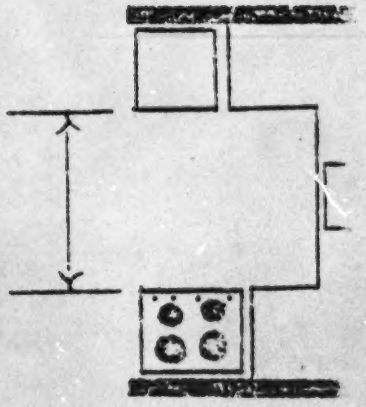












Conclusion

Let this brief publication of introductory ideas for working with the disabled student serve as a jumping off point for creative home economists who take their knowledge and abilities seriously. With the International Year of the Disabled almost behind us so many of the problems of this group have been minimally addressed. Certainly home conomists, who have the familiarity with home environments, principles of work simplification and good design need only cultivate a true interest in this client group and insights into health care systems that serve the disabled to make excellent contributions in the field.

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